

### REMARKS

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

**Claims 1-6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox (USPN 5,491,629, referred to as Fox).**

**As to claims 1 and 6, Fox discloses a machine-based method comprising: receiving historical (Fox, C 18 L 50: historical weather data) multi-dimensional data (Fox, C 13 L 13-20: weather data 201) representing multiple source variables having different strengths of measurement (Fox, C 14 L 60: "k" variables; also see C 06 L 22: weather and other variables; EN: climatology in general uses multiple source elements like temperature, precipitation etc. see C 05 L 16) to be used as an input to a predictive model (Fox, Abstract: predictive model) of a commercial system (Fox, Abstract: Executive Information System (EIS); EN: EIS is a representative of a commercial system), applying transformations to the source variables (Fox, C 13 L 18: transformations of those variables), and applying transformations to the data that are selected based on the strength of measurement represented by a variable (Fox, C 05 L 55: weather impact measurement through historical correlation; EN: correlation is to establish a relation between variables, and measurement through correlation would be based on the strength of measurement represented by a variable).**

**Fox does not teach variables selected to increase predictive power. However, it would have been obvious to one with ordinary skills in the art at the time the invention was made to see that since the goal of Fox's invention is to improve productivity (Fox, C 04 L 48: improve productivity) by weather forecasting, there would be increased predictive power to support it.**

Fox did not disclose and would not have made obvious "assigning a status to each source variable, the status comprising the variable being a predictor primary variable or a transformed variable or having transformations applied in a variable definition field", as recited in amended claim 1. Fox derives variables for a weather impact model or deweathering regression model using the source variables without considering the status of the source variables. (See, e.g., Fox, col. 13, line 21 to col. 14, line 28.) Nor does Fox assign a status to each source variable.

**As to the additional limitation in Claim 6, Fox discloses adjusting unstable values of the variables (Fox, C 14 L 64: regression is the statistical technique employed; EN: regression is a statistical technique that deals with adjustment and counter-adjustment) to reduce inaccurate (Fox, C15 L 02: more accurately define the observed changes) associations (Fox, C 14 L 65: quantify these relationships; EN: relationships are associations between variables).**

**Fox does not teach predictor variables and target variables. However, it would have been obvious to one with ordinary skills in the art at the time the**

invention was made to see that Fox's system is designed to solve problems related to source and target merchandise (Fox, C 02 L 19: source, acquire, and achieve specific target merchandise) using prediction, and therefore, it would be using predictor and target variables.

The applicant disagrees. Fox did not disclose and would not have made obvious "adjusting unstable values of variables to reduce inaccurate associations between predictor variables and target variables," as recited in amended claim 6. Fox does not consider the values of his variables being unstable or not, let alone adjusting unstable values of variables.

Rather, Fox uses a multiple regression model to quantify relationships between the change in weather and the change in sales and turn the relationships into an equation. (See, e.g., *Id.*, col. 14, lines 59-67.) The multiple regression model uses weather data and sales data that are selected based on, for example, time periods and locations of the stores, to determine regression coefficients of the equation so that the equation is a best fit to the weather data and the sales data. (See, e.g., col. 11, lines 25-28, col. 12, lines 30-36, and col. 15, lines 5-8 and lines 16-19.) Further, instead of "adjusting unstable values of variables", Fox uses additional variables to increase the accuracy of changes in retail sales. (See, e.g., *Id.*, col. 14, line 67 to col. 15, line 4.)

Fox uses regression techniques to adjust unstable values (Fox, C 14 L 64: regression is the statistical technique employed; EN: regression is a statistical technique that deals with adjustment and counter-adjustment). Further, he does correlation to establish associations (Fox, C 05 L 55: weather impact measurement through historical correlation; EN: correlation is to establish a relation between variables, and measurement through correlation would be based on the strength of measurement represented by a variable).

Fox, however, does not use regression techniques to adjust unstable values. Instead, as explained above, Fox applies regression techniques to selected data to produce an equation that best fits the selected data.

As to claim 8, Fox discloses a machine-based method comprising in connection with a project in which a user generates a predictive model (Fox, Abstract: predictive model) based on historical data about a system being modeled (Fox, C 18 L 50: historical weather data).

Fox does not teach automatically imputing missing values for continuous variables associated with the data, the variables having different strengths of measurement. However, it would have been obvious to one with ordinary skills in the art at the time the invention was made that Fox's invention uses regression (Fox, C 14 L 64: regression is the statistical technique employed), and to employ regression one would use a method like curve-fitting where missing values are imputed, because this would reduce distortion.

Fox did not disclose and would not have made obvious “automatically imputing missing values for variables associated with the data and using the imputed missing values in generating the predictive model”. Fox is silent on missing values of variables, let alone imputing the missing values and using the imputed missing values in generating a predictive model. Rather, Fox constructs an equation with variables and regression coefficients and uses selected data to determine the regression coefficients to produce an equation that represents the relationships among the selected data. (See, e.g., *Id.*, col. 14, line 59 to col. 15, line 21.)

All of the dependent claims are patentable for at least similar reasons as those for the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

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The fee in the amount of \$525 for the Petition for Extension of Time fee is being paid on the electronic filing system by way of deposit account authorization. Please apply any other charges or credits to deposit account 06-1050, referencing attorney docket 17146-004001.

Respectfully submitted,



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